Simultaneous determination of Atenolol, Amiloride hydrochloride and Hydrochlorothiazide using reversed phase liquid chromatography

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Abstract

New, simple, rapid and precise reversed phase liquid chromatographic method has been developed and validated for the simultaneous determination of atenolol, amiloride hydrochloride and hydrochlorothiazide. Chromatographic separation was carried out on a C18 column with a mobile phase consisting of 25 mM sodium acetate anhydrous: acetonitrile: triethylamine (95:5:0.1%, v/v/v) at a flow rate 0.9 ml min⁻¹ at ambient temperature. Quantitation was achieved with UV detection at 280 nm. Linearity, accuracy and precision were found to be acceptable over the concentration range of (5-50 μg ml⁻¹) for atenolol, (0.25-2.5 μg ml⁻¹) for amiloride hydrochloride and (1.25-25 μg ml⁻¹) for hydrochlorothiazide. The optimized method proved to be specific, robust and accurate for the quality control of the cited drugs in pharmaceutical preparation.